it is possible that this selection process may not capture 100 percent of the reported in-hospital deliveries occurring during a given period (for example, mothers whose primary reason for admission was other than delivery), the number of such births that are missed is likely to be very small. Because it is not possible to link maternal and infant discharge reports from the available data, the outcome of pregnancy (live birth or fetal death) could not be determined for deliveries identified from hospital discharge records.

Deliveries associated with maternal diabetes were those for which a diagnosis of preconceptional diabetes (ICD-9-CM code 648.0) or gestational diabetes/impaired glucose tolerance (ICD-9-CM code 648.8) was indicated on the discharge record. Prevalence estimates and 95 percent confidence intervals (CIs) were determined for overall maternal diabetes as well as for preconceptional diabetes (with or without mention of abnormal glucose tolerance test) and for gestational diabetes. In this analysis, we defined preconceptional diabetes as those cases with an ICD-9-CM assignment of 648.0; gestational diabetes was defined as those cases with an ICD-9-CM code of 648.8. Maternity patients with diabetes who did not deliver during the current episode of care (DRGs other than 370-375) were also identified and characterized according to type of diabetes.

For the vital records sample, all eligible live births and fetal deaths occurring during the study period were included. Presence of maternal diabetes was ascertained from a checkbox item for diabetes on the registration form. Records for which the presence of diabetes was unknown were excluded from all analyses. Prevalence estimates and 95 percent confidence intervals were determined for all deliveries and by pregnancy outcome (live birth or fetal death).

Demographic risk factors for maternal diabetes among live-born infants delivered during the twelve-month study period were determined from the infant's birth certificate. Odds ratios and 95 percent confidence intervals were calculated for diabetes associated with selected maternal factors. Because age is one of the strongest risk factors for diabetes, adjusted odds ratios for each of the maternal characteristics controlling for age were also calculated using the Mantel-Haenszel procedure.[9] Multivariable adjustment for confounding among the other risk factors examined was carried out with logistic regression.[10]

RESULTS

Prevalence of Diabetes

A search of vital records for the twelve-month study period identified 102,529 live births and 875 fetal deaths, for a total of 103,404 deliveries to North Carolina residents occurring in the state (Table 1). Overall, 154 (0.1%) of the records were excluded because of missing data, including 16 fetal deaths and 138 live births. The percentage of records with missing information on medical risk factors (including diabetes) was higher for fetal deaths than for live births (1.8% and 0.1%, respectively).

Table 1. Live Births and Fetal Deaths Among North Carolina Residents Delivering In-State, Oct. 1989 - Sept. 1990

	Number	Percent
Live Births	102,529	99.2
Fetal Deaths	875	0.8
Total Deliveries	103,404	100.0

From the hospital discharge records, 94,937 eligible deliveries were identified, covering approximately 92 percent of the live births and fetal deaths reported from vital records during the corresponding period of time. Sixty-three percent of these were uncomplicated vaginal deliveries; 18.4 percent were reported as Caesarean births with no additional complications (Table 2).